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ABSTRACT

It was hypothesized that subjects who liked a source of potential harm would estimate the probability of receiving harm mediated by him as lower than would subjects who disliked the source. To test the hypothesis, subjects were asked to estimate the probability that a liked or disliked confederate would deliver an electric shock on each of 10 trials. Subjects received shocks one, 5, or 9 times. An interaction between attraction and actual shock probability was found on probability estimations. Subjects in the negative attraction-90% probability condition estimated higher shock probabilities than did subjects in either the negative attraction-10% or positive attraction-90% conditions. Only when the subjects could make an attribution of malevolent intentions by receiving consistent punishment from a disliked harm-doer did subjective probability estimates rise above 50%. Subsequent liking for the confederate was determined by initial liking and was inversely related to the number of shocks received. The more often the confederate delivered shocks, the more active and the more potent he was perceived to be. (Author)

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Subjects were asked to estimate the probability that a liked or disliked confederate would deliver shock on each of ten trials. Subjects received one, five, or nine shocks. An interaction between attraction and actual probability of shock was found on probability estimations. Subjects in the low attraction-90% probability condition estimated greater probabilities of shock than subjects in either low attraction-10% or high attraction-90% conditions. Post-interaction measures indicated that liking for the confederate was determined by initial liking and was inversely related to number of shocks received.

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Subjective probability of receiving harm as a function of attraction and harm delivered[1]

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The present experiment was designed to test the hypothesis, prominent in a theory of social influence advanced by Tedeschi, et al. (in press) that, holding probability of harm constant, an individual's estimate of that probability would be lower when the source of possible punishment was liked than when he was disliked. Attraction between subject (S) and a confederate (C) of the experimenter (E) was manipulated prior to allowing the C to operate a shock apparatus. The S's task was to estimate the probability of receiving an electric shock from the C on each of ten trials. The C actually delivered one, five, or nine shocks. In addition to the primary hypothesis, it was expected that:

(1) Ss would tend to make estimates in a direct relationship to the actual probability of receiving shocks, although the actual and estimated probabilities would not match exactly, given the small number of trials and the fact that the S's task was to estimate the probability of receiving a shock on any one trial, not over all trials; and

(2) Ss' subsequent liking for C would be inversely related to the number of shocks received during the experiment.

Method

Subjects

Sixty males, participating to fulfill an introductory psychology course requirement, were randomly assigned across the six cells of the 2 x 3

factorial design.

Apparatus

The apparatus consisted of two metal boxes, each with a light and one with a button which could deliver shock, a timing device which would cause the lights on both boxes to come on (onset to onset) every 18 seconds and remain on for three seconds, and a Foringer Model number 1154M11 shock apparatus.

Procedure

After completion of an attitude similarity-dissimilarity technique of inducing positive and negative attraction between S and C (cf. Byrne, 1961), E held a bogus drawing to determine which of the two would operate the apparatus and which would serve as estimator. C always emerged from the drawing as the operator and S as the estimator. S and C were seated across from one another at a table and separated by a wooden partition which allowed no visual contact. Whenever the white light in front of him illuminated, the operator had the option to deliver a one-second electric shock to the estimator's fingertips. The instructions stated that whether or not a shock was delivered was entirely up to the operator. During the fifteen second inter-trial interval, S was to estimate the probability of receiving a shock the next time the light came on. Ss were asked to make their estimations in whole percentages between 0% and 100%. C actually delivered a shock to S one, five, or nine times during the ten trials. In the 10% condition, C delivered a shock only on the fifth trial, in the 90% condition a shock was delivered on every trial but the fifth, and in the 50% condition C shocked S in abbabaabab order.

At the conclusion of the ten trials, S and C were taken to the original testing cubicles to obtain post-experimental impressions. S was given a form of the Semantic Differential (Osgood, et al., 1957) which contained

separate pages for self and other person ratings, and a second administration of the IJS.

Results

Attraction Inducement

The desired positive and negative levels of attraction were established ($F=82.105$, $df=1/54$, $p<.001$). Ss in the positive attraction conditions ($\bar{X}=11.0$) liked C while Ss in the negative attraction conditions disliked C ($\bar{X}=6.6$).

Probability Estimation

Each S's estimations of the probability of receiving shock on each trial were averaged across all ten trials to obtain an overall measure of the expectations of receiving shock and a 2 x 3 analysis of variance was performed. No main effects of either attraction or actual shock probability were obtained ($p's>.25$); however, attraction and probability interacted ($F=5.131$, $df=1/54$, $p<.009$). Duncan Range tests performed on the six means indicated that Ss in the negative attraction-90% condition ($\bar{X}=.676$) had higher average expectations of receiving shock than did Ss in the negative attraction-10% condition ($\bar{X}=.458$, $p<.05$) or the positive attraction-90% condition ($\bar{X}=.431$, $p<.01$). Means from the other conditions were: positive attraction-10% ($\bar{X}=.588$); positive attraction-50% ($\bar{X}=.513$); and negative attraction-50% ($\bar{X}=.557$). None of the latter conditions differed significantly (all $p's>.10$).

Post-experimental Impressions

Main effects of both attraction ($F=14.639$, $df=1/54$, $p<.001$) and shock probability ($F=10.359$, $df=2/54$, $p<.001$) were found on the post-interaction measure of liking. The initial attraction manipulation held up throughout the experiment, as Ss in the positive attraction conditions ($\bar{X}=10.0$) liked C more at the close of the experiment than did Ss in the negative attraction conditions ($\bar{X}=7.7$). The final attraction scores also depended upon the

actual number of shocks received, as Duncan Range tests revealed that all three shock conditions differed from each other (all p's<.05). Ss who received only one shock ($\bar{X}$=10.15) liked C more than did Ss who received five shocks ($\bar{X}$=8.8) who in turn, liked C more than did Ss who received nine shocks ($\bar{X}$=7.2).

The number of shocks delivered to Ss significantly affected their impressions of C on the Evaluative (F=15.106, df=2/54, p<.001), Potency (F=36.125, df=2/54, p<.001), and Activity (F=3.472, df=2/54, p<.04) subscales of the Semantic Differential. As can be seen from the means presented in Table 1, positive evaluation of C was inversely related to the number of shocks received, while impressions of the potency and activity of C were directly related to the number of shocks received.

Insert Table 1 about here

The attraction manipulation also affected Ss' post-experimental ratings on the Semantic Differential. On the Activity dimension (F=9.987, df=1/54, p<.003), Ss in the negative attraction conditions rated C as less active ($\bar{X}$= -1.833) than did Ss in the positive attraction conditions ($\bar{X}$=0.733). Attraction for C also affected Ss' ratings of self-potency during the experiment (F=4.829, df=1/54, p<.001). Ss in the positive attraction conditions ($\bar{X}$= -2.563) saw themselves as less potent than did Ss in the negative attraction conditions ($\bar{X}$= -0.933).

Discussion

The relationship between one's estimated probability of receiving harm from another and attraction toward him proved to be rather complex. The first hypothesis received only partial support by the result that Ss in the positive attraction conditions provided lower probability estimations

TABLE 1

IMPRESSIONS OF C AS A FUNCTION OF NUMBER OF SHOCKS RECEIVED

Semantic Differential Subscale	Actual probability of shock		
	10%	50%	90%
Evaluative	7.25_a	2.10_b	0.05_c
Potency	-6.05_d	0.75_e	3.30_f
Activity	-2.00_g	-0.20_h	0.55_h

Note.--Means with different subscripts within any row differ by at least $p<.05$.

than Ss in the negative attraction conditions; however, this result was obtained only when C delivered nine shocks. The second hypothesis was only partially supported because the actual probability of receiving shock affectd Ss' probability estimations in the predicted direction only in the negative attraction conditions. Ss in the positive attraction conditions did not estimate either a high or low probability of receiving shock on any trial, preferring to estimate around 50% levels. But Ss in the negative attraction conditions did react to the actual number of shocks received from C. When the disliked C delivered shock on almost every trial, Ss increased their probability estimations to nearly seventy per-cent; however, when the disliked C was not consistently punishing, Ss estimated around fifty per-cent. Thus, Ss appeared to accept that there was about equal probability of receiving shock or not on any trial and significantly distorted their estimations upward only when they could attribute definite hostile intentions to a disliked source.

Although several interpretations for the interaction might exist, the present authors prefer to incorporate the results into an attribution theory framework. One of the concerns of attribution theory (cf. Kelley, 1967) is the development of inferences about the benevolent or malevolent intentions of others. Given an ambiguous but dangerous situation where the source has no obvious reason to harm the target yet is given the capability to do so, attraction plays a crucial but not sufficient role in allowing the target to make inferences about the intentions of the source. If the source is disliked, the target must be suspicious of the source's motivation, carefully attending to the latter's behavior. However, only if the source proves to by consistently and arbitrarily harmful will the target be ready to infer malevolent intentions and raise his estimations of the probability of receiving harm. If the source is liked, on the other hand, no obvious

reason would be apparent for harm to be delivered. The target will be less suspect of the source and less willing to infer malevolent intentions during the brief interaction sequence. If the interaction continued for longer than ten trials, the correct inference might be made by the subjects in the positive attraction conditions. However, during the short run, punishment was not expected, as was evidenced by a trend toward decreasing probability estimations in the positive attraction conditions as the actual number of shocks increased. Additional support for the hypothesis that negative attraction caused Ss to carefully attend to situational behaviors while positive attraction resulted in less responsiveness was obtained from correlations performed between the Ss' probability estimates and other dependent variables. High correlations between estimated probabilities and post-experimental ratings of liking, evaluation, activity, and potency of the confederate (all p's<.05) were obtained only in the negative attraction conditions.

The attraction inducement held up throughout the experiment and as predicted, post-experimental liking for C was inversely related to the number of shocks received. Semantic Differential findings indicated that C was perceived as more active and potent the greater the number of shocks that he delivered to the Ss. The greater use of harm, the more dynamic but the less liked the user.

Finally, Ss in the positive attraction conditions perceived the C to be more active and themselves less potent than did Ss in the negative attraction conditions. Given an imbalance of power which purportedly was the result of chance, Ss in the negative attraction conditions were not willing to admit that the disliked C was active or that they were impotent. Ss in the positive attraction conditions, on the other hand, were probably unhappy that they drew the task of estimator, but were willing to admit realistically that the liked C was active and that they were relatively impotent.

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Footnotes

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